

TRIPLET

TEST EQUIPMENT



NEW MODEL 310-10 WITH ADAPTER

Versatile, miniature combination VOM and AC ammeter clamp-on adapter. Clamp-on jaws of ammeter adapter fit around any single conductor to permit direct reading of 0-6-12-30-60-120-300 amps AC, without breaking circuit or piercing the insulation. Adapter securely locks to VOM body; can be left on permanently while using VOM ranges, or removed. VOM ranges: DC volts, 0-3-12-60-300-1200 at 20,000 ohms/volt; AC volts, 0-3-12-60-300-1200 at 5000 ohms/volt; DC ma, 0-600; DC ma, 0-6-60-600; ohms, 0-20-200-200,000; megohms, 0-2-20. Size, $8\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{4}$ ". With batteries, leads. Wt., $3\frac{3}{4}$ lbs.

66 F 588. NET. 48.02

MODEL 310 VOM ONLY. Miniature, hand-sized VOM with 18 ranges. Same as above, but without AC ammeter clamp-on adapter. $4\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt., 1 lb.

84 F 674. NET. 33.81

MODEL 379 LEATHER CARRYING CASE. Holds Model 310-10. Shpg. wt., 8 oz.

66 F 590. NET. 5.39



MODEL 630 VOM

Popular, accurate VOM. $5\frac{1}{2}$ " meter with $4\frac{3}{4}$ " scale. Ranges: DC and AC volts, 0-3-12-60-300-1200-6000, DC at 20,000 ohms/volt, AC at 5000 ohms/volt; DC current, 0-60 microamps, 0-1-12-120 ma, and 0-12 amps; resistance, 0-1000-10,000 ohms and 0-1-100 megohms; db, -30 to +70 in 7 ranges; output v., 0-3-12-60-300-1200-6000. $7\frac{1}{2} \times 5\frac{1}{2} \times 3\frac{3}{4}$ ". With batteries, leads. Shpg. wt., 6 lbs.

84 F 568. NET. 43.61

ACCESSORIES FOR TRIPLET 630, 630-A, 630-NA & 631 VOM'S

HIGH-VOLTAGE PROBE. For 630, 630-A or 631. Extends DC range to 30 kv. Polystyrene insulation. Shpg. wt., 8 oz.

84 F 544. NET. 14.21

MODEL 639 CASE. Durable leather carrying case for 630, 630-A, 630-NA, or 631. Meter can be used without removal from case. Shpg. wt., $1\frac{1}{2}$ lbs.

84 F 569. NET. 9.21

MODEL 639-P CASE. As above, with sponge rubber padding, $1\frac{3}{4}$ lbs.

84 F 562. NET. 14.60

TESTER STAND. Holds above meters at 45° angle. Shpg. wt., 1 lb.

84 F 573. NET. 49c



631



630-A



650



660



666-HH



630-NA



625-NA



666-R

MODEL 631 VTVM-VOM

Battery-operated, 34-range VTVM and VOM. Easy-to-read VTVM ranges: 0-1-2-6-30-120 DC volts; 11 megohms input impedance. VOM ranges: DC volts, 0-3-12-60-300-1200 at 20,000 ohms/volt; AC volts, and audio output volts, 0-3-12-60-300-1200 at 5000 ohms/volt; DC microamperes, 0-60; DC ma, 0-1-12-120-1200 at 250 mv; DC amps, 0-12 at 250 mv; db, -30 to +56; ohms, 0-1500-15,000; megohms, 0-1-5-150. $3\frac{1}{2} \times 5\frac{1}{2} \times 7\frac{1}{2}$ ". With batteries and 48" leads with alligator clips. Shpg. wt., 5 lbs.

84 F 546. NET. 63.21

MODEL 650 VTVM

Highly accurate VTVM. Ranges: DC volts, 0-1-5-10-50-100-500-1000; AC volts, 0-1-5-10-50-100-500; resistance, 0-1000 megohms in six ranges, $7\frac{1}{2} \times 5\frac{1}{2} \times 3\frac{3}{4}$ ". With 2 alligator clips, AC-RF probe, ohms-DC probe and battery. For 110-120 volts, 60 cycle AC. Shpg. wt., 8 lbs.

84 F 558. NET. 87.71

H. V. PROBE. 0-50,000 v. DC. Wt., 8 oz.

84 F 564. NET. 14.21

MODEL 659 LEATHER CARRYING CASE. Shpg. wt., $1\frac{1}{2}$ lbs.

84 F 559. NET. 10.29

MODEL 666-HH VOM

Accurate, low-cost VOM. 400 microampere meter movement. Ranges: AC-DC volts, 0-10-50-250-1000-5000 at 1000 ohms per volt; DC ma, 0-10-100-500; ohms, 0-2000-400,000. With battery and 48" leads. Plastic case. $5\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{4}$ ". 4 lbs.

84 F 555. NET. 26.95

MODEL 625-NA VOM

Wide-range VOM. Large mirror scale. DC volts, 0-1-2.5-5-25-125-500-2500 at 20,000 ohms/volt and 0-2.5-10-50-250-1000-5000 at 10,000 ohms/volt; DC current, 0-50 ma, 0-1-10-100-1000 ma, and 0-10 amps; resistance, 0-2000-200,000 ohms, 0-40 mega. AC volts, 0-2.5-10-50-250-1000-5000 at 10,000 ohms/volt, $5\frac{1}{2} \times 2\frac{1}{2} \times 6\frac{1}{2}$ ". With batteries and leads. Wt., 6 lbs.

84 F 575. NET. 53.41

MODEL 629 CASE. Leather case with handle. Shpg. wt., 1 lb.

84 F 561. NET. 7.06

MODEL 630-A VOM

Laboratory type, highly accurate VOM. Features unit construction; series ohmmeter circuits; special $\frac{1}{2}\%$ resistors for greater accuracy; long, mirrored meter scales for reduced parallax. Accuracy: $1\frac{1}{2}\%$ on ohms and 0-1200 DC volts; 4% on 6000 DC volts and all AC ranges. Ranges: DC and AC volts 0-3-12-60-300-1200-6000 (DC at 20,000 ohms per volt, AC at 5000 ohms per volt); DC current, 0-60 microamps, 0-1-12-120 milliamperes, and 0-12 amps; resistance, 0-1000-10,000 ohms, and 0-1-100 megohms; db, -30 to +70 in 7 ranges; output volts, 0-3-12-60-300-1200-6000. $5\frac{1}{2}$ " meter with $4\frac{3}{4}$ " scale. $7\frac{1}{2} \times 5\frac{1}{2} \times 3\frac{3}{4}$ ". Complete with batteries and 48" leads. Shpg. wt., 6 lbs.

84 F 574. NET. 53.41

MODEL 660 LOAD-CHEK

Wattmeter-voltmeter. Detects overloads and underloads. Load-Chek shows if power drawn from line exceeds or is less than the proper value. Power cord of unit under test plugs into receptacle on Load-Chek. Two 3" meters provide simultaneous wattage and voltage readings. Two watt-meter ranges. Toggle switch changes watt scale. Ranges: 0-500-1000 AC-DC watts; 0-150 AC-DC volts. Black plastic case. Size, $6\frac{1}{2} \times 2\frac{1}{2}$ ". Shpg. wt., 4 lbs.

84 F 537. NET. 33.81

MODEL 630-NA VOM

Offers unusually high accuracy. 70 ranges: $\pm 1\frac{1}{2}\%$ on DC to 1200 v.; $\pm 3\%$ on AC to 1200 v. Features: DC volts: 8 ranges to 6000 (10,000 ohms/v.); 8 ranges to 3000 (20,000 ohms/v.); AC volts: 6 ranges to 6000 (5000 ohms/v.); 6 ranges to 3000 (10,000 ohms/v.); DB: -30 to +70 in 12 ranges. DC microamps: 1 range to 120 (240 mv); 2 ranges to 600 (120 mv). DC milliamperes: 4 ranges to 1200 (240 mv); 3 ranges to 600 (120 mv). DC amps: 1 range to 12 (240 mv); 1 range to 6 (120 mv). Resistance: 3 ranges to 100,000 ohms; 3 ranges to 100 megohms. Output: All 12 AC volt ranges. $7\frac{1}{2} \times 5\frac{1}{2} \times 3\frac{3}{4}$ ". Mirror scale. With leads, batteries. Shpg. wt., 6 lbs.

84 F 512. NET. 73.01

MODEL 666-R VOM

Compact VOM. Single range-function switch and ohms adjust. 1000 ohms/volt sensitivity. Has 3" meter. Ranges: DC and AC volts, 0-10-50-250-1000-5000; DC ma, 0-10-100; DC amps, 0-1; ohms, 0-3000-300,000; megohms, 0-3. Black plastic case, $5\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{4}$ ". With batteries, 48" test leads. Shpg. wt., 4 lbs.

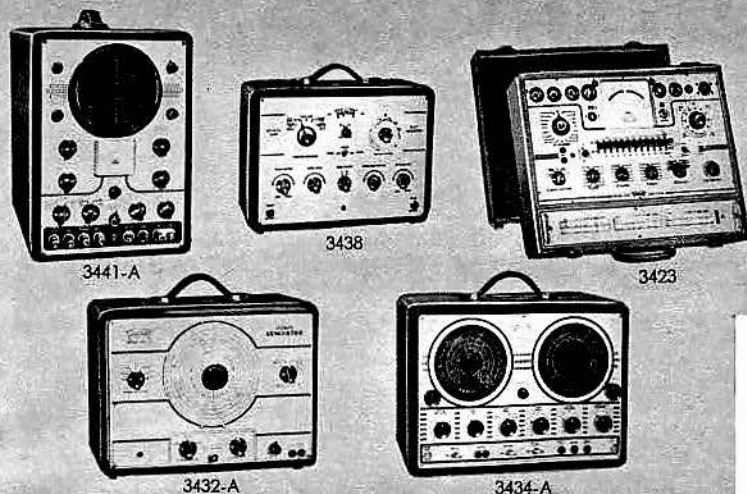
84 F 557. NET. 28.91

MODEL 669 CASE. Cowhide case for Model 666R or 666-HH. Wt., 1 lb.

84 F 560. NET. 5.98

MODEL 669-RL CASE. Leather case for Model 666-R. Shpg. wt., 1 lb.

84 F 547. NET. 6.47



MODEL 3441-A TV-FM OSCILLOSCOPE

Wide-range 5" TV-FM oscilloscope. Suitable for color TV. Push-pull vertical and horizontal output amplifiers. 4.5 megacycle bandwidth, usable to 9 mc. Vertical sensitivity: 10 rms mv/inch maximum. Horizontal response, 20 cps to 150 kc. Peak-to-peak, 2 1/2" voltmeter reads 0-1000 volts in 8 ranges. Phased 60-cycle horizontal sweep and return trace eliminator for use with sweep generators. Phone jack on panel for audio check of waveform under observation; for audio circuit tracing. Variable sawtooth output from 10 to 60,000 cycles. With coaxial cable. Size: 15 1/2 x 11 1/2 x 1 1/2". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 42 lbs.

84 FZ 530. NET. 244.51

9989 CRYSTAL PROBE. For use with above.

Shpg. wt., 8 oz.

84 F 545. NET. 10.29

MODEL 3432-A SIGNAL GENERATOR

Quality signal generator for AM-FM radio, black-and-white and color TV servicing. Covers complete range from 160 kc to 110 mc (220 mc using harmonics) with no skips in frequency. 6 3/4" etched dial. Jacks provided for either internal modulation or audio output. Internal modulation variable 0-100% at 400 cps. Ranges selected by 7-position switch. Coaxial output cable. Size: 15 1/2 x 11 1/2 x 6 1/4". For 110-120 v., 50-60 cycle AC. Shpg. wt., 12 lbs.

84 FZ 677. NET. 97.51

MODEL 3438 DOT GENERATOR

High-quality dot-bar generator for checking video, RF, IF, sync and color circuits. Provides standard vertical and horizontal sync pulses; horizontal bars (480-600 cps) and vertical bars (189 kc, crystal-controlled); white dot pattern; and square block cross hatch. Crystal controlled accuracy for varying colors through approx. 330° of the color spectrum with any combination of the function selector. Will produce red, blue and green color spectrum and colors corresponding to R-Y, B-Y, I and Q axis. Has both positive and negative video outputs. Completely self-contained. 6 1/4 x 11 1/2 x 1 1/2". For 110-120 v., 50-60 cycle AC. Shpg. wt., 16 lbs.

84 FZ 598. NET. 224.91

MODEL 3434-A TV-FM GENERATOR

For TV and FM receiver servicing. Continuous tuning to 243 mc. Regulated power supply for greater oscillator stability. Sweep center frequency: 0-60, 60-120 and 120-243 mc. Sweep width: 0.1 to 12 mc, continuously variable. Marker frequencies: 3.5-4.9, 19.5-29.3, 29-48.6 (fundamentals); 48.6-243 mc on harmonics. Crystal frequency: 20 mc on fundamentals; harmonics to 216 mc (crystals not supplied). Modulation: 600 cycles in both crystal and marker frequencies. Crystal and variable marker permits simultaneous presentation of two markers. 15 1/2 x 11 1/2 x 8 3/4". For 110-120 v., 50-60 cycle AC. Shpg. wt., 27 lbs.

84 FZ 534. NET. 234.71

TRIPOLET

TEST EQUIPMENT



MODEL 3413-B TUBE TESTER

extremely versatile tube tester. Checks all radio receiving tubes, including series-string types, ballasts, miniatures, and hearing aid types. Dual-sensitivity, neon-type short test. Checks TV picture tubes when used with T-2247-BV adapter listed below. Shows shorts, open circuits and condition of tube elements, connections, taps, etc. Provides continuity test for electrical appliances, motors, etc. 6" meter with 3-color scale. Accurate BAD-7—GOOD tests. Built-in, Speed-Roll chart; Line voltage compensator; Counter-portable case; handle and removable cover. Size, 15 1/2 x 11 1/2 x 6 1/2". For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 28 lbs.

84 FZ 591. NET. 77.91

T-2247-BV ADAPTER. Adapts models 3413-B and 3423 for picture tubes. Shpg. wt., 1 lb.

84 F 539. NET. 5.29

MODEL 3423 TUBE TESTER

Accurate, versatile tube tester. Tests by proportional mutual conductance method—simulates actual tube operating conditions. Tests receiving tubes, subminiatures, ballasts, low-power transmitting types, etc. Includes tests for series-string tubes. Reads mutual conductance directly in microhos; also BAD-7—GOOD scale. Checks pilot lamps and continuity of motors, etc. Checks for shorts and leakage between elements. Indicates gassy and noisy tubes. Filament voltage adjustable from 0.63 to 117 in 9 steps. Size, 14 1/4 x 18 3/4 x 6 1/2". For 110-120 v., 50-60 cycle AC. Shpg. wt., 24 lbs.

84 FZ 541. NET. 195.51

Sprague Quality Test Equipment

MODEL KT-1 CAPACITOR CHECKER

An up-to-the-minute capacitor tester. Permits checking capacitors while they are wired into the equipment being serviced. No unsoldering is necessary—not even when capacitor is wired in parallel with a resistor. Instantly checks for direct short, open or intermittent conditions in all types of capacitors. Bypass, coupling, and blocking capacitors from 30 mmf. to 2000 mmf. can be checked even when wired in parallel with resistances as low as 60 ohms. Capacitors between .1 mfd. and 2000 mfd. can be checked even when wired in parallel with resistances as low as 2 ohms. Sturdy steel case with medium gray wrinkle finish. Size, 9 x 6 x 5 1/4". For 110-120 v., 50-60 cycle AC. Shpg. wt., 7 lbs.

84 FX 005. NET. 33.81

NEW MODEL TO-5 TEL-OHMIKE

Multi-purpose bridge-type capacitor analyzer. Quickly detects open, shorted, or intermittent capacitors. Provides an accurate, multi-range capacitance and power factor measuring bridge; an insulation resistance checker for paper, mica, and ceramic capacitors; a leakage current indicator for electrolytics (tests at rated voltages); and a turns ratio scale to measure turns ratio of power and audio transformers. Measures capacitance from 1 mmf. to 2000 mfd. in 5 ranges; electrolytic leakage from 0-60 ma in 2 ranges; power factor of electrolytics to 55% in 3 ranges. Up to 600 volts DC for electrolytic test. Size, 8 7/8 x 14 3/4 x 6 1/4". For 110-120 v., 50-60 cycle AC. Shpg. wt., 12 lbs.

66 FX 591. NET. 82.22

NEW MODEL LF-1

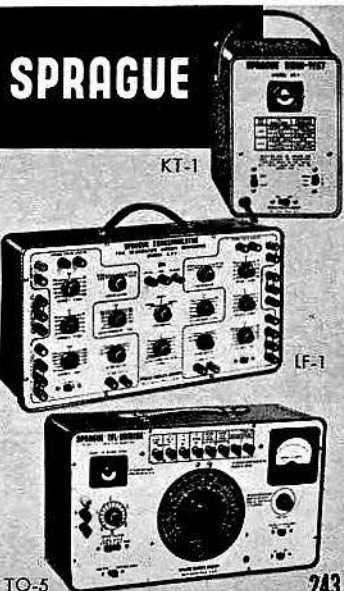
Unique transistor circuit simulator. Simulates any 1-transistor amplifier stage, AC or DC, except high-power audio stages. Useful for testing experimental circuits quickly and easily—without time-consuming soldering or messy breadboards. Excellent for lab and quality control applications—predicts transistor performance in various types of circuits. Includes all variable components necessary for an RC amplifier. With 5-way binding posts for transformer cou-

TRANSIMULATOR

pling and metering circuits. Has self-contained separate bias and load battery supplies, negative or positive voltages. Can be used with PNP, NPN junction or surface barrier transistors; common or grounded emitter, base or collector. For circuits using more than one transistor, Transimulators may be cross-coupled. Less batteries (requires 8—RCA VS035 cells; see page 286). 5 1/2 x 14 3/4 x 8 1/2". Wt., 11 1/2 lbs.

66 FX 592. NET. 77.91

Express Shipment Recommended for Test Equipment



METER DIMENSIONS

Mfr's Type	Flange	Body Dia.	Depth	Scale
221-PL*	2 1/4"	2 1/4"	1 1/2"	2.197"
227-PL†	2 1/4"x2 3/4"	2 3/4"	1 3/4"	2.197"
231-PL*	2 1/4"	2 1/4"	1"	1.92"
237-PL†	2 1/4"x2 3/4"	2 3/4"	1 3/4"	1.92"
321-PL*	3 1/2"	3 1/2"	1"	3.11"
327-PL†	3 1/2"x3 3/4"	3 3/4"	1 3/4"	3.11"
331-PL*	3 1/2"	3 1/2"	1"	2.65"
337-PL†	3 1/2"x3 3/4"	3 3/4"	1 3/4"	2.65"
341-PL*	3 1/2"	3 1/2"	1"	3.11"
347-PL†	3 1/2"x3 3/4"	3 3/4"	1 3/4"	3.11"
420-PL†	4 1/2"x4 3/4"	4 3/4"	1 3/4"	4.14"
430-PL†	4 1/2"x4 3/4"	4 3/4"	1 3/4"	3.6"
440-PL†	4 1/2"x4 3/4"	4 3/4"	1 3/4"	4.14"

TRIPLETT

PANEL METERS



2 1/2" and 3 1/2"
Round

4 1/2"
Rectangular

TYPE PL PLASTIC-FRONT PANEL METERS

Advanced-design panel meters with wrap-around fronts of clear, unbreakable plastic. Have many advantages over conventional style panel meters. Full open dial provides much longer, more readable scale in same size case. Attractive design enhances appearance of test instruments and panels. All have stud mountings. Raised plastic "coverglass" allows full natural lighting from top, sides, and bottom. Durable, white enamel finish metal meter faces with black scales and characters.

Accuracy within $\pm 2\%$ on full scale. DC types have D'Arsonval movements with extra-light moving coil. AC types have air-damped, iron-vane movements. All types have selected jewel bearings, highly polished and specially-treated pivots. Mounting template provided with each meter for accurately determining necessary cut-out. Spade-type pointers; molded zero adjusters; and ceramic pointer stops. Av. shpg. wt., 1 1/2 lbs. Be sure to include Range and Model Number on all meter orders.

AC MILLIAMMETERS

Range	331-PL 3 1/2" Rnd.	NET EACH			337-PL 3 1/2" Rect.	NET EACH			430-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-100	66 F 863	10.78	9.70	9.16	66 F 864	10.78	9.70	9.16	66 F 854	11.37	10.23	9.66

AC VOLTMETERS

Range	231-PL 2 1/2" Rnd.	NET EACH			237-PL 2 1/2" Rect.	NET EACH			331-PL 3 1/2" Rnd.	NET EACH			337-PL 3 1/2" Rect.	NET EACH			430-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-50	66 F 825	11.17	10.05	9.50	66 F 826	11.17	10.05	9.50	66 F 859	10.78	9.70	9.16	66 F 780	10.78	9.70	9.16	66 F 799	11.37	10.23	9.66
0-150	66 F 825	11.17	10.05	9.50	66 F 826	11.17	10.05	9.50	66 F 860	11.66	10.50	9.92	66 F 781	11.66	10.50	9.92	66 F 799	11.37	10.23	9.66
0-300	66 F 825	11.17	10.05	9.50	66 F 826	11.17	10.05	9.50	66 F 861	12.74	11.47	10.83	66 F 782	12.74	11.47	10.83	66 F 799	11.37	10.23	9.66

AC AMMETERS

Range	231-PL 2 1/2" Rnd.	NET EACH			237-PL 2 1/2" Rect.	NET EACH			331-PL 3 1/2" Rnd.	NET EACH			337-PL 3 1/2" Rect.	NET EACH			430-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-5	66 F 828				66 F 784				66 F 865				66 F 787				66 F 892			
0-10	66 F 829				66 F 783				66 F 866				66 F 788				66 F 893			
0-25	66 F 833	10.19	9.17	8.66	66 F 785	10.19	9.17	8.66	66 F 867	10.78	9.70	9.16	66 F 789	10.78	9.70	9.16	66 F 858	11.37	10.23	9.66
0-30	66 F 835				66 F 792				66 F 868				66 F 790				66 F 862			
0-50	66 F 832				66 F 785				66 F 869				66 F 791				66 F 896			

DC MILLIAMMETERS

Range	221-PL 2 1/2" Rnd.	NET EACH			227-PL 2 1/2" Rect.	NET EACH			321-PL 3 1/2" Rnd.	NET EACH			327-PL 3 1/2" Rect.	NET EACH			420-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-1	66 F 812	10.19	9.17	8.66	66 F 814	10.19	9.17	8.66	66 F 843	10.78	9.70	9.16	66 F 793	10.78	9.70	9.16	66 F 878	11.37	10.23	9.66
0-50	66 F 813	10.58	9.53	9.00	66 F 815	10.58	9.53	9.00	66 F 844	11.17	10.05	9.50	66 F 794	11.17	10.05	9.50	66 F 879	11.37	10.23	9.66
0-100	66 F 824	10.58	9.53	9.00	66 F 851	10.58	9.53	9.00	66 F 845	11.17	10.05	9.50	66 F 795	11.17	10.05	9.50	66 F 778	11.37	10.23	9.66
0-200	66 F 827	10.58	9.53	9.00	66 F 852	10.58	9.53	9.00	66 F 846	11.17	10.05	9.50	66 F 796	11.17	10.05	9.50	66 F 779	11.37	10.23	9.66
0-300	66 F 839	10.58	9.53	9.00	66 F 853	10.58	9.53	9.00	66 F 847	11.17	10.05	9.50	66 F 797	11.17	10.05	9.50	66 F 882	11.37	10.23	9.66
0-500	66 F 849	10.58	9.53	9.00	66 F 854	10.58	9.53	9.00	66 F 848	11.17	10.05	9.50	66 F 798	11.17	10.05	9.50	66 F 883	11.37	10.23	9.66

DC VOLTMETERS

1000 OHMS PER VOLT—FILM-TYPE MULTIPLIER RESISTORS

Range	221-PL 2 1/2" Rnd.	NET EACH			227-PL 2 1/2" Rect.	NET EACH			321-PL 3 1/2" Rnd.	NET EACH			327-PL 3 1/2" Rect.	NET EACH			420-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-50	66 F 804	10.98	9.88	9.33	66 F 805	10.98	9.88	9.33	66 F 834	11.47	10.32	9.75	66 F 806	11.47	10.32	9.75	66 F 872	12.05	10.85	10.25

DC AMMETERS

Range	221-PL 2 1/2" Rnd.	NET EACH			227-PL 2 1/2" Rect.	NET EACH			321-PL 3 1/2" Rnd.	NET EACH			327-PL 3 1/2" Rect.	NET EACH			420-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-5	66 F 822	10.98	9.88	9.33	66 F 830	10.98	9.88	9.33	66 F 855	11.47	10.32	9.75	66 F 880	11.47	10.32	9.75	66 F 885	12.05	10.85	10.25
0-10	66 F 823	10.98	9.88	9.33	66 F 831	10.98	9.88	9.33	66 F 856	11.47	10.32	9.75	66 F 881	11.47	10.32	9.75	66 F 886	12.05	10.85	10.25

DC MICROAMMETERS

Range	221-PL 2 1/2" Rnd.	NET EACH			227-PL 2 1/2" Rect.	NET EACH			321-PL 3 1/2" Rnd.	NET EACH			327-PL 3 1/2" Rect.	NET EACH			420-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-50	66 F 807	15.09	13.58	12.83	66 F 809	15.09	13.58	12.83	66 F 836	15.58	14.02	13.24	66 F 873	15.58	14.02	13.24	66 F 874	16.17	14.55	13.74
0-100	66 F 808	13.23	11.91	11.25	66 F 810	13.23	11.91	11.25	66 F 837	13.72	12.35	11.66	66 F 876	13.72	12.35	11.66	66 F 875	14.31	12.88	12.16
0-200	66 F 737	11.37	10.23	9.66	66 F 738	11.37	10.23	9.66	66 F 838	11.96	10.76	10.16	66 F 877	11.96	10.76	10.16	66 F 871	12.55	11.30	10.66

DB METER

Decibel meter, 8 milliwatts, 5% accuracy. Has internal resistance of 5000 ohms. 1.73 volts at zero db. 3 1/2" round.

Stock No.	Type	Range	Calibration	NET EACH		
66 F 811	321-PL	+6 to -10db	for 500 ohm line	15.68	14.11	13.33

VOLUME UNIT METER ("A" SCALE)

Volume unit meter. 3900 ohms impedance. Steady state reference, 1 milliwatt. For 600-ohm line. Also has 0-100% scale.

Stock No.	Type	Description	Range	NET EACH		
66 F 897	321-PL	3 1/2" Round	-20 to +3	19.31	17.38	16.41

THERMO-AMMETERS (RF)

Range	341-PL 3 1/2" Rnd.	NET EACH			347-PL 3 1/2" Rect.	NET EACH			440-PL 4 1/2" Rect.	NET EACH		
		1-9	10-24	25-49		1-9	10-24	25-49		1-9	10-24	25-49
0-5	66 F 818	11.86	10.67	10.08	66 F 817	11.86	10.67	10.08	66 F 819	12.45	11.20	10.58

TRIPLET PANEL METERS



227T 327T
237S 337S

Round

420
430

METER DIMENSIONS

ROUND FLUSH MOUNTING

Model No.	Flange	Body Dia.	Depth	Scale Length
227T	2 1/4"	2 1/4"	1 1/4"	1.76"
237S	2 1/4"	2 1/4"	1 1/4"	1.58"
327T	3 1/4"	2 1/4"	1 1/4"	2.49"
337S	3 1/4"	2 1/4"	1 1/4"	2.22"
361	3 1/4"	2 1/4"	1 1/4"	2.22"

RECTANGULAR FLUSH MOUNTING

Model No.	Flange	Body Dia.	Depth	Scale Length
227T	2 1/4" x 2 1/4"	2 1/4"	1 1/4"	1.76"
237S	2 1/4" x 2 1/4"	2 1/4"	1 1/4"	1.58"
327T	3 x 3"	2 1/4"	1 1/4"	2.49"
337S	3 x 3"	2 1/4"	1 1/4"	2.22"
420	4 1/2" x 4 1/2"	2 1/4"	1 1/4"	4.06"
430	4 1/2" x 4 1/2"	2 1/4"	1 1/4"	3.6"

GLASS-FRONT PANEL METERS

SPECIFICATIONS. Accuracy, within 2% of full scale. DC meters have D'Arsonval moving coil movements. AC meters have double, iron repulsion-type movements. Jeweled bearings and hardened alloy steel pivots. Metal dial faces, finished in white enamel, will not warp, crack or discolor under normal conditions. Have molded zero-adjusters and cushioned ceramic pointer stops.

All parts are heat-treated to eliminate strains and stresses, and to assure accurate alignment. Rigidity and alignment of bearing supports provide protection against vibrations. Steel parts are rustproofed. Black bakelite cases. Av. shpg. wt., 1 1/2 lbs. When ordering include Range and Model No. of meter. *Indicates overall depth but does not include terminals.

DC MILLIAMMETERS

Range	227T 2 1/2" Rnd.	227T 2 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	327T 3" Rect.	327T 3 1/2" Rnd.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	420 4 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH
0-1	66 F 150	66 F 170				66 F 120	66 F 100				66 F 136			
0-1.5	66 F 151	66 F 171	9.70	8.73	8.25	66 F 121	66 F 101	10.29	9.26	8.75	66 F 137	11.37	10.23	9.66
0-3	66 F 152	66 F 172				66 F 122	66 F 102				66 F 138			
0-5	66 F 153	66 F 173	9.70	8.73	8.25	66 F 123	66 F 103	10.29	9.26	8.75	66 F 139	11.37	10.23	9.66
0-10	66 F 154	66 F 174				66 F 124	66 F 104				66 F 140			
0-15	66 F 155	66 F 175				66 F 125	66 F 105				66 F 141			
0-25	66 F 156	66 F 176	10.09	9.08	8.58	66 F 126	66 F 106	10.68	9.61	9.07	66 F 142	11.76	10.58	10.00
0-50	66 F 157	66 F 177				66 F 127	66 F 107				66 F 143			
0-100	66 F 158	66 F 178	10.09	9.08	8.58	66 F 128	66 F 108	10.68	9.61	9.07	66 F 144	11.76	10.58	10.00
0-150	66 F 159	66 F 179				66 F 129	66 F 109				66 F 145			
0-200	66 F 160	66 F 180				66 F 130	66 F 110				66 F 146			
0-250	66 F 161	66 F 181	10.09	9.08	8.58	66 F 131	66 F 111	10.68	9.61	9.07	66 F 147	11.76	10.58	10.00
0-300	66 F 162	66 F 182				66 F 132	66 F 112				66 F 148			
0-750	66 F 163	66 F 183	10.09	9.08	8.58	66 F 133	66 F 113	10.68	9.61	9.07	66 F 149	11.76	10.58	10.00
0-1000	66 F 164	66 F 184				66 F 134	66 F 114				66 F 149			

AC MILLIAMMETERS

Range	237S 2 1/2" Rnd.	237S 2 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	337S 3" Rect.	337S 3 1/2" Rnd.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	430 4 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH
0-10	66 F 570	66 F 580				66 F 490	66 F 470				66 F 496			
0-15	66 F 571	66 F 581	9.70	8.73	8.25	66 F 491	66 F 471	10.29	9.26	8.75	66 F 497	11.37	10.23	9.66
0-25	66 F 572	66 F 582				66 F 492	66 F 472				66 F 498			
0-50	66 F 573	66 F 583				66 F 493	66 F 473				66 F 499			
0-100	66 F 574	66 F 584				66 F 494	66 F 474				66 F 499			
0-200	66 F 575	66 F 585	9.70	8.73	8.25	66 F 495	66 F 475	10.29	9.26	8.75	66 F 499	11.37	10.23	9.66
0-250	66 F 576	66 F 586				66 F 496	66 F 476				66 F 499			
0-500	66 F 577	66 F 587				66 F 497	66 F 477				66 F 499			

DC AMMETERS

Range	227T 2 1/2" Rnd.	227T 2 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	327T 3" Rect.	327T 3 1/2" Rnd.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	420 4 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH
0-1	66 F 510	66 F 525	9.70	8.73	8.25	66 F 450	66 F 440	10.29	9.26	8.75	66 F 460	11.37	10.23	9.66
0-5	66 F 511	66 F 526	10.49	9.44	8.92	66 F 451	66 F 441	10.98	9.88	9.33	66 F 461	12.05	10.85	10.25
0-10	66 F 512	66 F 527	10.49	9.44	8.92	66 F 452	66 F 442	10.98	9.88	9.33	66 F 462	12.05	10.85	10.25
0-15	66 F 513	66 F 528	10.49	9.44	8.92	66 F 453	66 F 443	10.98	9.88	9.33	66 F 463	12.05	10.85	10.25
0-25	66 F 514	66 F 529	10.49	9.44	8.92	66 F 454	66 F 444	10.98	9.88	9.33	66 F 464	12.05	10.85	10.25
0-30	66 F 515	66 F 530	10.49	9.44	8.92	66 F 455	66 F 445	10.98	9.88	9.33	66 F 465	12.05	10.85	10.25
0-50	66 F 516	66 F 531	10.49	9.44	8.92	66 F 456	66 F 446	10.98	9.88	9.33	66 F 466	12.05	10.85	10.25
0-100	66 F 517	66 F 532	10.49	9.44	8.92	66 F 457	66 F 447	10.98	9.88	9.33	66 F 467	12.05	10.85	10.25
0-150	66 F 518	66 F 533	10.49	9.44	8.92	66 F 458	66 F 448	10.98	9.88	9.33	66 F 468	12.05	10.85	10.25
0-200	66 F 519	66 F 534	10.49	9.44	8.92	66 F 459	66 F 449	10.98	9.88	9.33	66 F 469	12.05	10.85	10.25
0-300	66 F 520	66 F 535	10.49	9.44	8.92	66 F 460	66 F 450	10.98	9.88	9.33	66 F 470	12.05	10.85	10.25
0-500	66 F 521	66 F 536	10.49	9.44	8.92	66 F 461	66 F 451	10.98	9.88	9.33	66 F 471	12.05	10.85	10.25

AC AMMETERS

Range	237S 2 1/2" Rnd.	237S 2 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	337S 3" Rect.	337S 3 1/2" Rnd.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	430 4 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH
0-1	66 F 340	66 F 350				66 F 320	66 F 300				66 F 330			
0-5	66 F 341	66 F 351	9.70	8.73	8.25	66 F 321	66 F 301	10.29	9.26	8.75	66 F 331	11.37	10.23	9.66
0-10	66 F 342	66 F 352				66 F 322	66 F 302				66 F 332			
0-15	66 F 343	66 F 353				66 F 323	66 F 303				66 F 333			
0-25	66 F 344	66 F 354				66 F 324	66 F 304	10.29	9.26	8.75	66 F 334	11.37	10.23	9.66
0-50	66 F 345	66 F 355	9.70	8.73	8.25	66 F 325	66 F 305	10.29	9.26	8.75	66 F 335	11.37	10.23	9.66
0-100	66 F 346	66 F 356				66 F 326	66 F 306	10.29	9.26	8.75	66 F 336	11.37	10.23	9.66
0-150	66 F 347	66 F 357				66 F 327	66 F 307	10.29	9.26	8.75	66 F 337	11.37	10.23	9.66
0-200	66 F 348	66 F 358				66 F 328	66 F 308	10.29	9.26	8.75	66 F 338	11.37	10.23	9.66
0-250	66 F 349	66 F 359				66 F 329	66 F 309	10.29	9.26	8.75	66 F 339	11.37	10.23	9.66
0-500	66 F 350	66 F 360				66 F 330	66 F 310	10.29	9.26	8.75	66 F 340	11.37	10.23	9.66

DC MICROAMMETERS

Range	227T 2 1/2" Rnd.	227T 2 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	327T 3" Rect.	327T 3 1/2" Rnd.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH	420 4 1/2" Rect.	1 to 9 EACH	10 to 24 EACH	25 to 49 EACH
0-20	66 F 054	66 F 015	17.25	15.52	14.66	66 F 059	66 F 049	17.84	16.05	15.16	66 F 065	18.91	17.02	16.08
0-50	66 F 055	66 F 016	14.60	13.14	12.42	66 F 060	66 F 050	15.09	13.58	12.83	66 F 066	16.17	14.55	13.75
0-100	66 F 056	66 F 017	12.74	11.47	10.83	66 F 061	66 F 051	13.23	11.91	11.25	66 F 067	14.31	12.88	12.16
0-200	66 F 057	66 F 018	10.88	9.79	9.25	66 F 062	66 F 052	11.47	10.32	9.75	66 F 068	12.54	11.29	10.66
0-500	66 F 058	66 F 019	10.39	9.35	8.83	66 F 063	66 F 053	10.88	9.79	9.25	66 F 069	11.96	10.76	10.16

TRIPLET PANEL METERS

DC VOLT METERS

1000 OHMS PER VOLT—WITH CARBON, FILM-TYPE RESISTORS

Economical units. For applications where high humidity is not encountered. †Meters with external resistors.

Range	221T 3" Rect.	227T 3" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	327T 3" Rect.	321T 3 1/2" Rnd.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	420 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
0-10	66 F 903	66 F 923				66 F 943	66 F 963				66 F 983			
0-15	66 F 904	66 F 924				66 F 944	66 F 964				66 F 984			
0-25	66 F 905	66 F 925	10.49	9.44	8.92	66 F 945	66 F 965	10.98	9.88	9.33	66 F 985	12.05	10.85	10.25
0-50	66 F 906	66 F 926				66 F 946	66 F 966				66 F 986			
0-100	66 F 907	66 F 927				66 F 947	66 F 967				66 F 987			
0-150	66 F 908	66 F 928				66 F 948	66 F 968				66 F 988			
0-200	66 F 909	66 F 929	10.49	9.44	8.92	66 F 949	66 F 969	10.98	9.88	9.33	66 F 989	12.05	10.85	10.25
0-250	66 F 910	66 F 930				66 F 950	66 F 970				66 F 990			
0-300	66 F 911	66 F 931				66 F 951	66 F 971				66 F 991			
0-500	66 F 912†	66 F 932†	10.98	9.88	9.33	66 F 952	66 F 972	11.56	10.40	9.83	66 F 992	12.64	11.38	10.75
0-750	66 F 913†	66 F 933†				66 F 953	66 F 973				66 F 993			
0-1000	66 F 914†	66 F 934†				66 F 954†	66 F 974†				66 F 994†			
0-2000	66 F 915†	66 F 935†				66 F 955†	66 F 975†				66 F 995†			
0-3000	66 F 916†	66 F 936†	13.03	11.73	11.08	66 F 956†	66 F 976†	13.62	12.26	11.57	66 F 996†	14.70	13.23	12.49
0-4000	66 F 917†	66 F 937†				66 F 957†	66 F 977†				66 F 997†			
0-5000	66 F 918†	66 F 938†				66 F 958†	66 F 978†				66 F 998†			

1000 OHMS PER VOLT—WITH WIRE-WOUND MULTIPLIER RESISTORS

Have moisture-resistant, vacuum-sealed, wire-wound resistors. †Have external resistors.

Range	221T 3" Rect.	227T 3" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	327T 3" Rect.	321T 3 1/2" Rnd.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	420 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
0-1	66 F 900	66 F 920				66 F 940	66 F 960				66 F 980			
0-3	66 F 901	66 F 921				66 F 941	66 F 961				66 F 981			
0-5	66 F 902	66 F 922	10.49	9.44	8.92	66 F 942	66 F 962	10.98	9.88	9.33	66 F 982	12.05	10.85	10.25
0-10	66 F 903	66 F 923				66 F 943	66 F 963				66 F 983			
0-25	66 F 904	66 F 924				66 F 944	66 F 964				66 F 984			
0-50	66 F 905	66 F 925	12.84	11.55	10.92	66 F 945	66 F 965	13.33	12.00	11.33	66 F 985	14.41	12.97	12.25
0-100	66 F 906	66 F 926				66 F 946	66 F 966				66 F 986			
0-150	66 F 907	66 F 927	13.33	12.00	11.33	66 F 947	66 F 967	13.92	12.52	11.83	66 F 987	14.99	13.49	12.75
0-200	66 F 908	66 F 928				66 F 948	66 F 968				66 F 988			
0-300	66 F 909	66 F 929	16.27	14.64	13.83	66 F 949	66 F 969	16.86	15.17	14.33	66 F 989	17.93	16.14	15.25
0-500	66 F 910†	66 F 930†	18.23	16.41	15.49	66 F 950†	66 F 970†	18.72	16.85	15.92	66 F 990†	19.80	17.82	16.83

AC VOLT METERS

Range	231T 3" Rect.	237T 3" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	337T 3" Rect.	331T 3 1/2" Rnd.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	430 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
0-3	66 F 259	66 F 279				66 F 218	66 F 209				66 F 239			
0-5	66 F 250	66 F 270				66 F 220	66 F 210				66 F 230			
0-10	66 F 251	66 F 271	9.70	8.73	8.25	66 F 221	66 F 211	10.29	9.26	8.75	66 F 231	11.37	10.23	9.66
0-15	66 F 252	66 F 272				66 F 222	66 F 212				66 F 232			
0-25	66 F 253	66 F 273				66 F 223	66 F 213				66 F 233			
0-50	66 F 254	66 F 274	9.70	8.73	8.25	66 F 224	66 F 214	10.29	9.26	8.75	66 F 234	11.37	10.23	9.66
0-100	66 F 255	66 F 275				66 F 225	66 F 215				66 F 235			
0-150	66 F 256	66 F 276	10.68	9.61	9.08	66 F 226	66 F 216	11.17	10.05	9.50	66 F 236	12.25	11.02	10.41
0-250	66 F 257	66 F 277	11.07	10.05	9.50	66 F 227	66 F 217	11.76	10.58	10.00	66 F 237	12.84	11.55	10.92
0-300	66 F 258	66 F 278	11.76	10.58	10.00	66 F 228	66 F 218	12.25	11.02	10.41	66 F 238	13.33	12.00	11.33
0-500	66 F 259	66 F 279	15.39	13.85	13.08	66 F 229	66 F 219	15.97	14.38	13.58	66 F 239	17.05	15.35	14.49

VOLUME UNIT METERS

Highly damped meters for broadcast monitoring, public address or communications systems. "A" scale: 20 to 30 volume units on top of arc; 0-100% modulation on bottom of arc. Have D'Arsonval elements with Alnico-V magnets. Sensitive rectifiers operate under wide frequency variations. Steady state ref., 1 mw. Zero adjustment. Internal impedance, 3900-ohms. For 600-ohm lines. Metal dial is yellow with black and red lettering. In rugged black cases of molded bakelite. *Illuminated.

327T 3" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
66 F 075	18.72	16.85	15.92
66 F 076*	20.48	18.43	17.41

420 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
66 F 071	23.52	21.17	20.00
66 F 072*	26.75	24.07	22.75

DECIBEL METERS (+6 to -10 db)

Power level indicators. For measuring sound or noise level in broadcasting, public address and recording systems. Read up 6 and down 10 db. Zero db is 1.73 volts. Calibrated for use with 500-ohm line. Reference level is 6 milliwatts. Internal resistance is 5000-ohms. White enameled metal dial with black lettering. In black bakelite molded cases. *Illuminated.

327T 3" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
66 F 263	14.99	13.49	12.75
66 F 264*	16.95	15.25	14.42

420 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
66 F 265	16.76	15.08	14.25
66 F 266*	18.03	16.23	15.35

DC MILLIVOLTMETERS

Range	327T 3" Rect.	321T 3 1/2" Rnd.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	420 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
0-50	66 F 078	66 F 088	10.29	9.26	8.75	66 F 098	11.37	10.23	9.66
0-100	66 F 079	66 F 089				66 F 099			

ZERO-CENTER DC MICROAMMETERS

Range	327T 3" Rect.	321T 3 1/2" Rnd.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	420 4 1/2" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
50-0-50	66 F 086	66 F 084	13.23	11.91	11.25	66 F 094	14.31	12.88	12.16
100-0-100	66 F 087	66 F 085	11.47	10.32	9.75	66 F 095	12.54	11.29	10.66

TYPE 361 WATTMETERS

For shop, field and laboratory. Use as appliance tester, wattmeter, voltmeter, ammeter, etc. Accuracy guaranteed within 2% for either DC or single-phase AC to 133 cps.

Stock No.	Watts	Volts	Amps	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH
66 F 286	0-150	150	1			
66 F 285	0-300	150	2	23.52	21.17	20.00
66 F 287	0-750	150	5			

PRECISE MULTI-RANGE PANEL METER KITS

Versatile, new, multi-range panel meter kits. Lets you choose from 4 to 18 different meter ranges using only one meter movement! Features interchangeable dial faces which slide in or out easily, and plug-in shunt or multiplier resistors. Each kit is supplied complete with high-quality, jeweled D'Arsonval meter movement, precision resistors, 4 1/2" mirror scales, inserts, meter case (4 1/2" x 4 1/2") and full instructions. Shpg. wt., 1 1/4 lbs.

Stock No.	Type	Ranges	EACH
83 F 958	DC Volts; 1000 ohm/volt; .05 v. to 1000 v.	18	29.95
83 F 959	DC Volts; 20,000 ohm/volt; .1 v. to 1000 v.	18	35.95
83 F 960	AC Volts; 1000 ohm/volt; 1 v. to 1000 v.	16	35.95
83 F 961	DC Amp.; .05 to 1 amp.	6	14.95
83 F 962	DC μ a.; 50 μ Amp. to 400 μ Amp.	4	18.95
83 F 963	AC Amp.; .001 to 1 amp.	10	29.95

